# School Shop

vol. VIII no. 4
DECEMBER, 1948

**Two Sides of the Coin**
by Lloyd W. Ashby

**Area Panel for Tools**
by Harvey D. Miner

**An Easily-Made Modern Bookcase**
by R. Paul Lightle

**Teaching Tools—a new regular feature**
by John F. Nowak

On the cover: Checking wheel alignment in the auto shop at Williamsport, Pa., Technical Institute. For a discussion of general values in this training, see page 5.

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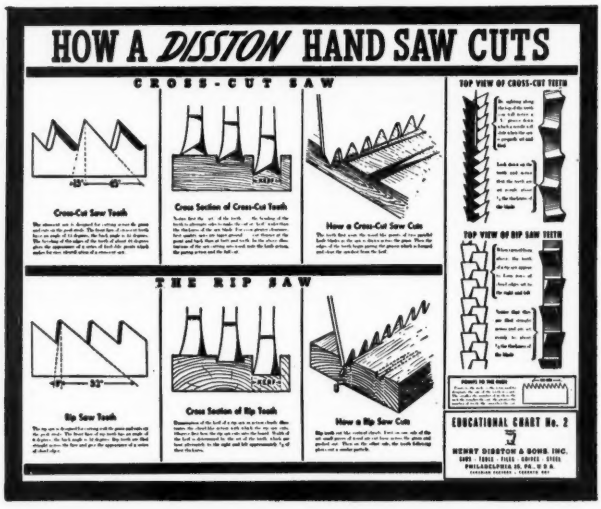
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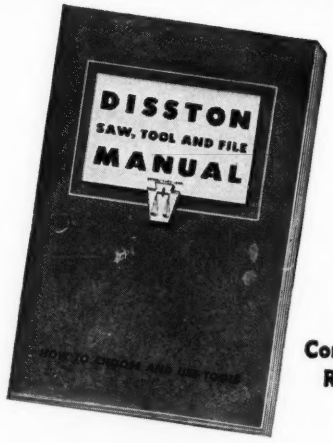


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# School Shop

FOR INDUSTRIAL EDUCATION TEACHERS

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# School Shop TALK

## COMMENTS ON ISSUES FACING INDUSTRIAL EDUCATION

### Salaries and Inflation

Salaries, like everything else, have been going up. At least the national averages show such movement.

A recent survey by C. J. Gerbracht and K. Phillips of the Ohio State University, which was published in brief form by the American Industrial Arts Association, shows the upward climb of salaries in the industrial-education departments of teacher-training institutions.

The pay increases are notable, but, as the authors indicate, so also is the cost of living. Using the base figure of 100 for 1939 and using 167 as the index for 1948 as published by the U. S. Bureau of Labor Statistics, salaries have increased only about half of the increase in the cost of living.

Typical is the national average for assistant professors of industrial arts. The national average in 1939 was $2547. Today it is $3426 while the salary needed to give a commensurate gain in purchasing power is $4273. The increase in salary is 34 percent while the increase in living costs is nearly 70 percent.

Obviously, the increases have been too little and too late.

We have been talking about average salaries, of course. The range in salaries paid is terrific. For instance, the low end of the scale for assistant professors is $2000 while the high is $5912. The average figure noted above is $3426, but it most be borne in mind that half of the teacher-trainers of this rank do not receive this much money.

Geographic location seems to have relatively little to do with the pay of industrial-arts teacher-trainers. Some of the highest salaries are paid in the South, traditionally considered to be underprivileged educationally. States with the highest averages are scattered through all sections of the country. Low states do show a slight pattern in that the tier of states from the Dakotas south to Louisiana have a poor record.

This salary survey serves a useful purpose in calling to the attention of the profession the need for higher schedules if the best men are to be drawn into teacher education. The future strength of industrial-arts education lies in the ability and breadth of vision of the teachers now entering the profession. Obviously the best in teacher-trainers is needed. It is our duty to hold out for this kind of person and demand that they be paid attractive salaries.

### Here They Come!

In the next eight years, high-school enrolments are expected to increase by a million and a third students. These are good sound figures based on the number of youngsters now at lower grade levels as compiled by the U. S. Office of Education.

Many of these students will want industrial-education courses so that shop facilities undoubtedly will be taxed in the immediate future.

Even more indicative of the anticipated greater demand for industrial-education facilities is the changing emphasis in the secondary-school curriculum. The discussions of life-adjustment education which are now sweeping the country show that school administrators and teachers are becoming increasingly aware of the necessity for broadening the secondary curriculum with industrial-education subjects to meet the needs of young people for educational opportunities closer to their interests and aptitudes. The result will be that a greater proportion of the student body than formerly will be encouraged to take shop subjects.

With more students in secondary schools and a higher percentage of them taking industrial-education subjects, the pressure on facilities and teaching personnel during the next few years is going to be tremendous.

What can be done to anticipate needs?

New building construction should be started at once. Careful planning should go into these buildings so that adequate provisions are made for shops and laboratories. Remodeling plans should be made for the better utilization of existing structures with the change in emphasis in the secondary curriculum. Teachers and administrators of industrial education should take an active part in this planning and carefully survey their anticipated needs so that a strong position can be taken with superintendents and school architects to insure proper shop facilities.

*Your Editor*

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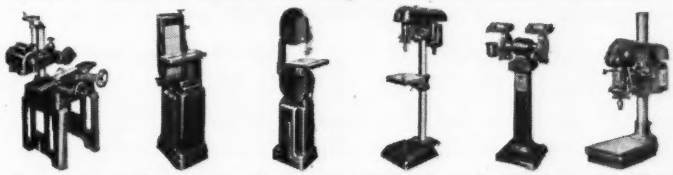

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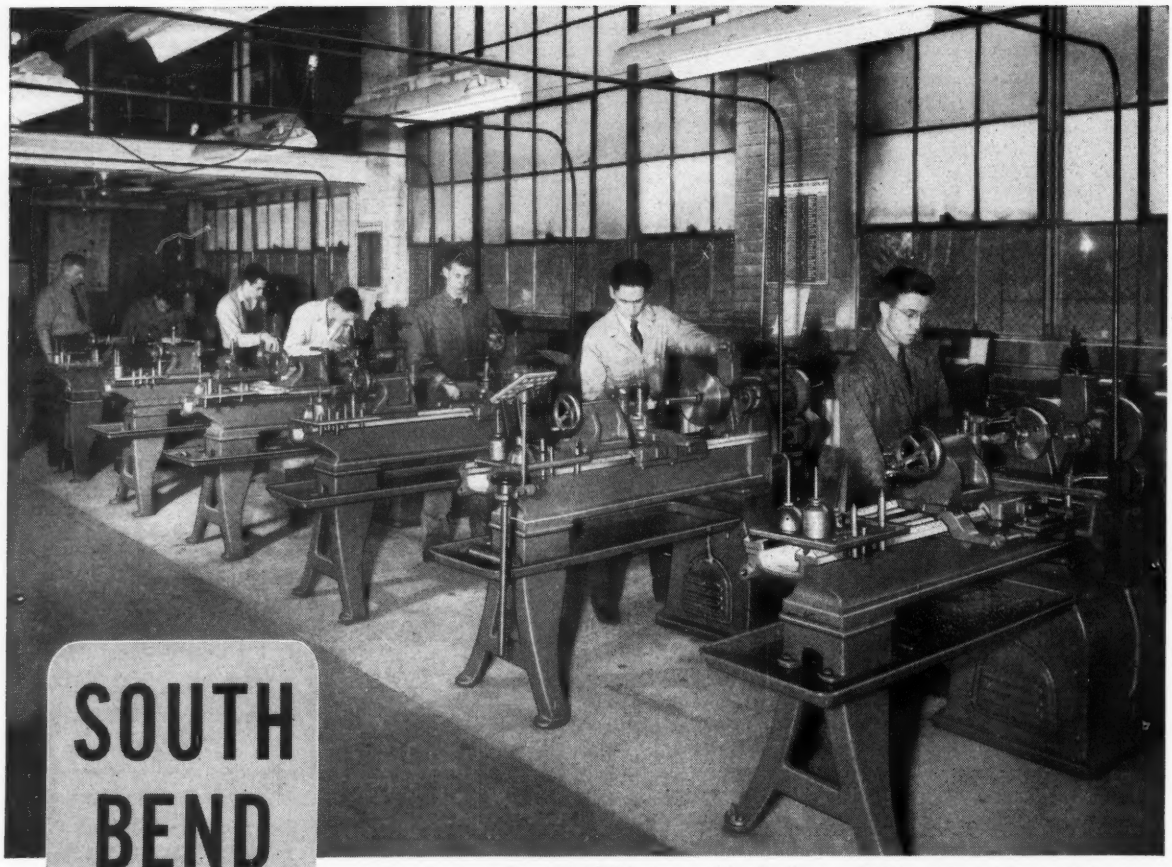

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# Two Sides of the Coin

*By Lloyd W. Ashby*

**The tendency in some educational circles is to stress the separateness of vocational and general education. The apparent cleavages are not as serious as they are pointed up to be, says Lloyd W. Ashby, Principal of the Omaha, Neb., Technical High School, as he shows the relationships that do exist between the two fields of education.**

THE terms "vocational" and "general" as applied to education are often loosely used. Confusion results.

At the outset, let us define terms. General education is perhaps most difficult to delimit, and therefore the term means many things—and different things—to many people.

Dr. Briggs has recently stated that general education "has at least three distinct meanings, all of which together should determine its purpose and processes. . . . First of all, general education concerns that development which is desirable, even necessary, for every normal individual. . . . A second concern of general education is to produce the well-rounded individual. The more numerous his understandings and interests and the more intelligent contacts he has with the world about him and with the people whom he meets, the bigger his world and the broader the life he lives. . . . A third concern of general education is the integration of every youth with his environing society."[1]

The Harvard report, *General Education in a Free Society*, as is well known, places the humanities in the center of the picture of education that will provide unity and direction. This has been the same conclusion reached by many other groups, while others are severely critical of this finding.

Kähler and Hamburger, recognizing the need for a definition of terms, say that "in-school vocational education and training is considered to include all education and training below college grade that aims primarily at preparation for work, as offered mainly by technical high schools, vocational high schools, junior colleges, and technical institutes, regardless of whether such education and training is federally aided. Preparation for the strictly professional occupations is excluded."[2]

## Relationship of Vocational to Technical

Definitive meanings of the relationship of the words "vocational" and "technical" are also needed. "Vocational" education refers to teaching with emphasis on manipulative skills as well as theory. "Technical" education uses the shops only as adjuncts to technical courses or as laboratories, as in science.

All major reports have emphasized both general and vocational education. *The Cardinal Principles of Secondary Education*[3] lists the seven widely publicized aims: (1) health, (2) command of fundamental processes, (3) worthy home membership, (4) vocation, (5) citizenship, (6) worthy use of leisure, and (7) ethical character.

The Committee on Orientation has expressed the belief that there is, or should be, no conflict between general and vocational education. Issue V states that there is general agreement that vocational training is not only desirable but also necessary.[4] Function VI states in part that it is a function of secondary education "to establish and develop in all major fields of knowledge, not merely in a few protected subjects, interests which are numerous, varied, and as deep as possible . . ."[5]

Is there then no real conflict between vocational and general education? From a study of definitions and theory the answer is in the negative. The two types of education are supplementary, they are the opposite sides of a revolving sphere.

Certainly vocational education is in a very real sense general education. It is definitely a step in the direction of making the pupil a well-rounded individual. The creation of marketable skills and training is one of the marks of the educated man. Ben Franklin exhibited this in his many-sided personal accomplishments and personality. Printer, publisher, writer, scientist, inventor, politician—Franklin had the ability to make a living in any of these fields. But his mind was too active to be confined to one field. The depth of Franklin's thinking (or any man's) may perhaps be ascertained by examining the breadth of his interests. Henry Thoreau suggested this after demonstrating that the depth of Walden Pond was greatest where the two longest diameters intersected.

## Environment and Vocational Education

Vocational education helps one adapt to the environment. By its practical and down-to-earth nature, vocational education definitely is also general education in terms of Brigg's third suggestion, that is, it is concerned with "the integration of every youth with his environing society." It is general education because (*a*) it tends to create an appreciation of the work of the world in a particular sphere, as, for example, printing; (*b*) it leads in the direction of selfsufficiency, selfconfidence, and selfreliance—all of which are needed to a degree by all persons; (*c*) the vocational training itself compels one to broaden out to a certain extent, as, for example, printing requires certain basic skills in English, art, mathematics, spelling, punctuation, etc.; (*d*) like printing, all vocational areas lead to a creation of interests and understandings in related areas or even in areas completely nonrelated.

General education is also vocational in a very real sense. That which creates a well-rounded person, one with broader understandings, one who better understands his environment, will obviously make an excellent foundation for any vocational area. The high-school lad taking a college preparatory course is taking what, for him, is a vocational course in many cases—although this falls outside the definition given by Kähler and Hamburger above. Industry and business are increasingly saying to the schools, "Give us people with a good general foundation, good physique, good mental health—and we will teach them the details of our own particular endeavor." Therefore, whether a student

[1] Thomas H. Briggs, "The Role of General Education," *Bulletin of the National Association of Secondary-School Principals*, March, 1948.

[2] Alfred Kähler and Ernest Hamburger, *Education for an Industrial Age*, Ithaca, N. Y.: The Cornell University Press, 1948, 69.

[3] *Cardinal Principles of Secondary Education*. U. S. Office of Education Bulletin, 1918, No. 35. Washington, D.C.: Government Printing Office.

[4] "Issues of Secondary Education," Report of the Committee on the Orientation of Secondary Education, Department of Secondary-School Principals of the National Education Association, *Bulletin of the National Association of Secondary School Principals*, January 1936, 159-181.

[5] "Functions of Secondary Education," Report of the Committee on the Orientation of Secondary Education, Department of Secondary-School Principals of the National Education Association, *Bulletin of the National Association of Secondary-School Principals*, January, 1937, 142.

goes in for vocational or general education, the important thing is that general education be stressed. But, as indicated above, this may be done either in so-called general education or so-called vocational education—either of which is the other if you examine it with enough care.

Parenthetically, it should be stated that the chief problem is not between vocational and general education—the problem is to find something for the 60 percent who, at the secondary-school level, take to neither vocational nor general (college preparatory or "general" courses) education. This is the problem toward which the Prosser Resolution committee is now directing its attention. Vocational and college preparatory courses at the secondary level require somewhat comparable levels of ability. They are selected by students in terms of interests, ability to finance college training, and the possibilities for training in the local community.

### Not a General Cleavage

The cleavage, if there is one, between the academic and the vocational high school, is due partly to the fact that one opens the door to college, the other does not. This phenomenon is not too general in the United States outside of the New York metropolitan area and to a lesser extent in other metropolitan areas. Omaha, Neb., Technical, and Arsenal Technical of Indianapolis, Ind., for example, are comprehensive high schools with more than normal emphasis on vocational and technical aspects of the program. Graduates of these high schools are welcomed by all colleges if the course requirements are met by the individual pupil. Furthermore, many colleges and universities will admit students who have taken vocational courses from such schools, without particular attention being paid to the typical college entrance requirements. *Students of equal mental capacity will do about the same level of work in college regardless of the high-school courses taken*—assuming further that the courses taken were equally well taught.

A distinction between the academic and vocational schools also exists to some extent because of the snobbish attitude on either or both sides of the fence. The academically inclined often tend to look down their noses at the kind of education that prepares people for work. On the other hand, potential engineers, and engineering schools which many technical high-school graduates attend look with contempt on the average academic setup. To them it is not only soft, it is also useless. The comprehensive high school, offering the full range from academic to the vocational and technical, has the best opportunity to overcome the cleavage which now exists. This carries with it the further charge that neither the academic nor the vocational area should be so narrow in its concept of a liberal education as to mutually exclude each other in the individual pupil's program. When we are organized so that the capable pupil can contact both fields adequately we will have made progress. This will mean the end of narrowly conceived vocational courses that specialize much more than is desirable at the high-school level. It will also mean the demise of academic courses so hide-bound, so filled with tradition, so narrow in concept that pupils pursuing them get no experience whatsoever in the shop and homemaking areas.

### Cause for Alarm

In those areas where a noticeable cleavage exists between types of schools or courses within comprehensive schools, there is cause for alarm. Kähler and Hamburger state the problem in this manner: ". . . It is true that the vocational high school has not attained in all parts of the country the social recognition or the educational prestige of the general high school. This circumstance not only hampers the expansion of a sound vocational high school system but is entirely contrary to the ideals of a free society, in which functional, not social, differences between manual and intellectual labor should prevail, and in which educational opportunities for all the youth of the nation should be equal."[6] As the authors further suggest, the difficulty in obtaining full acceptance of the vocational school is due partly to public prejudice and partly to defects in the vocational schools or vocational departments.

Vocational schools should develop better and broader approaches to general education, avoid too narrow specialization, and carry on adequate programs of public relations. This last is often particularly needed within the school system itself. Most teachers and guidance people are the products of the strictly academic-type school. The people within the school system itself must understand the problem and help secure some reasonable semblance of a fair distribution of the most mentally capable pupils in all types of high schools or courses within high schools.

[6] *op. cit.*, 218-219.

### Relationship Summarized

Trends in the relationships between general and vocational education at the present time may be summarized somewhat as follows:

1. There is a trend toward less complete specialization in the vocational course—certainly not over 50 percent of the pupil's time in the last two years of high school, and considerably less in the first two years, is the present picture. Legislation is more liberal in this regard as indicated by provisions of the George-Barden Act.

2. There is a trend toward vocational preparation for groups of occupations rather than the very narrow areas sometimes attempted in the past.

3. There is a trend toward enriching the pupil's course by the use of the time freed due to the less narrow vocational course. More time for science, mathematics, the humanities, etc. Kähler and Hamburger recommend for the vocational school a four-year course in English, a three-year course in social science, a four- or three-year course in mathematics, a three- or four-year course in scientific and technical instruction, and two or three weekly periods of health education.

4. There is a trend—faint but discernible—toward lessening the pressure of the old bogey of college preparation. This gives the pupils in the academic areas some chance to get into the shops, the arts, music, homemaking, etc.

5. There is a trend toward recognition of the fact that a technically based society such as ours demands that a fair share of the most capable pupils find their way into productve enterprises.

6. There is a trend toward increasing recognition that cleavages in the educational ladder lead inevitably to cleavages in the social order — group against group, class against class.

7. There is increasing recognition of the fact that vocational courses now attract too few pupils, and particularly too few of the most able—a situation to be improved only by at once broadening the scope of the vocational school and changing the "climate" surrounding it.

**New Feature**

SCHOOL SHOP's new feature containing pointers on instruction and shop administration will be found on page 16. Look for "Teaching Tools" there and send your queries to the author, John F. Nowak.

EACH shop teacher must some time face the problem of determining which of several possibilities for tool storage lends itself best to his shop. No one method for storing is the best one for all possible situations. However, I believe that it can be demonstrated that for most shops the area panel—a combination of tool panel and tool cabinet —is best. It combines ready accessibility to tools with the protective feature of safe storage. A cabinet that cannot be secured is not a practical one, neither is a secure cabinet that is not within reach of the tool users.

There are other possibilities for tool storage, such as individual tool kits, toolrooms, or a tool panel. Each has its advantages as well as disadvantages. They

The patternmaking shop at Bowling Green, Ohio, University. Several cabinets are opened out to present an appearance of a continuous panel.

# Area Panel Solves Tool Storage Problem

*By Harvey D. Miner*

**Safe storage and ready accessibility are combined in the area panel—a blend of panel and cabinet. Harvey D. Miner is an instructor in patternmaking at Bowling Green, Ohio, University.**

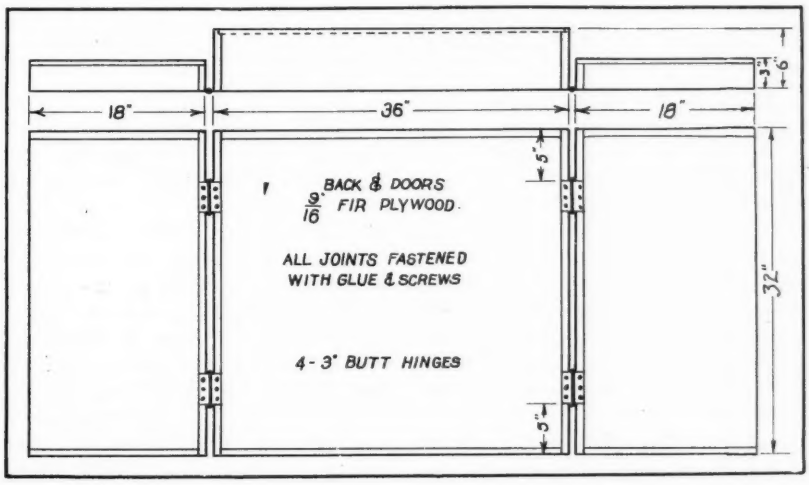
must be judged in terms of the following functions of proper tool storage: first, a place provided for every tool; second, an opportunity for keeping tools clean, sharp, and usable; third, tools accessible to the one who wishes to use them.

## Other Methods Considered

The tool kit, in the opinion of this author, indicates a retardation of shop organization. The method dates back to the ancient era of exclusively manual training. There is one great advantage —it serves to make the student more conscious of his responsibility. The impact of being entrusted with the care of a set of tools is such that the boy to whom it happens is likely soon to realize the value of proper care and its effect on craftsmanship. One certain disadvantage of the tool kits is that they are expensive. Individual tool kits in a unit or general shop require a wide assortment of tools which may otherwise be reduced by utilizing some other method of tool dispersal.

The toolroom method is an advance on the individual tool kit. It is widely used in industry. However, to adapt the methods of industry to an educational installation may not always produce the best results. If we desire to teach from the industrial-arts viewpoint we cannot follow the industrial tool check method. One advantage is that the student may learn to appreciate his tools if he is required to sharpen and care for them. On the other hand, from the industrial-arts standpoint much valuable floor space is lost when the industrial toolroom system is put into practice.

Better than either of the previously noted methods is the tool panel which is openly situated in the shop. Here, the student has access to the tools when he needs them. There is a time saving over the toolroom plan. The open panel should display the tools in as functional a manner as possible. Systematic placing, outlining, designating, and, if possible, an illustration of the most common uses of each tool should be aimed at. The outstanding advantage of this method is that it is a valuable teaching aid in tool usage, good housekeeping, and tool care. A well-arranged panel, painted attractively, is an asset to any shop. Certain disadvantages should be noted, however. There is less check on tools under this system. Should there be pilferers in the class, the panel will serve as a means by which they can get at the tools. Careless pupils will be more likely to leave their tools on the benches when class is finished if there is not any check on the returns. Moreover, there is no adequate means by which to deny anyone access to the panel on entering the shop.




## Area Panel Best

The area panel meets and overcomes the objections to all the methods we have considered. Two hinged doors are so arranged that they will open to display a

wide array of common tools. The tools are systematically arranged in the cabinet as in the tool panel previously mentioned. The cabinet is opened at the beginning of class. All tools are thus automatically available to members of the class. At the end of the class period the cabinet may be closed, thus providing a safe storage for tools.

The chief disadvantage is that the presence of a checker is required at the close of the period. Whoever is selected for the job will have his work load made lighter if tools are properly labeled, outlined, and placed. There will be less difficulty in locating lost, misplaced, stolen, or damaged tools if this is done.

The problem of who is to keep the tools in condition will come up in any method of storage. The instructor may prefer to do it or may appoint a trusted student. In order to operate at its highest efficiency, the tool cabinet must be kept full by replacing lost and damaged tools. There should be on hand a surplus of the commonly used tools in order to replace the ones that are lost or otherwise removed from use.

The tool cabinet is not of a standard size or shape. Each shop represents a different situation and tool problem which may require different sized and shaped cabinets. The shop may require more than one panel. If more than one are used, they may be placed in such a manner that the opened doors display a continuous panel. The cabinet may be placed on a flat wall, in a corner, on a bench, or suspended from the ceiling. Your shop may have an unsightly wall surface which should be obscured. In this case, the cabinet should be utilized to cover it.

### Proper Arrangement Vital

Tool arrangement within the cabinet should be done with certain objectives in view. First, all tools of the same type should be kept together. Second, the tools most in use should be placed in a cabinet where they will be most easily accessible. Third, the tools should be placed in such a manner that they will not appear to take up much space. Of course, it is also important that tools be not placed too close together.

Individual tools present special problems. It is important, for the sake of safety, to place sharp edged tools below the eye level of the students. Thus, if any tools fall they are not likely to injure anyone about the head. Place tools with cutting edges in such a way that they will not be blunted or damaged by carelessness in handling tools in or near the cabinet.

The cabinet should be painted a light color inside. This will add pleasantness, cheer, and coolness to a shop. The cabinet should be painted outside to correspond with the shop color scheme. Proper painting is very important in the tool cabinet. Today's painting practice features lighter colors in complementary schemes. Drab colors, once found in all schoolrooms and shops, are on the way out. Educational institutions lag behind industry in this. The fact that properly chosen color schemes add to health and efficiency has been discovered in some areas of industry.

Cabinets shown in the accompanying picture were designed with the color factor in mind. Inside of the cabinets is pastel blue; trim is of tangerine, and the outsides are of slate grey. The color scheme is being adopted throughout the University. At Bowling Green the tool panel area is being adopted throughout the industrial-arts department and adapted to the functions of each shop area.

### Note to AVA'ers:

While you are packing for the trip to Milwaukee and the American Vocational Association convention, November 29 to December 4, make a note to pay a visit to the SCHOOL SHOP booth, number 3 at the convention. We'll be glad to see you and swap shop talk.

As you probably know, this year's convention promises to be an outstanding one. It is Wisconsin's centennial year and officials of the state are going all out to make the meeting a memorable one.

## Leaders (?) in Industrial-Arts Education

**By Marcus Fitzgerald**

## *Filibuster Harry*

"That story brings his age up to 126."

FILIBUSTER Harry is known for his line, since he learned in college football that a good offense is the best defense. Filibuster Harry is a poor handler of tools—the chisel always cuts too deep—the solder always wants to stick at the wrong place, the saw never cuts straight. Harry's shop shows lack of craftsmanship and the pupils nail and paint at random.

Filibuster Harry has most of the answers. The visitor to his shop is told that the pupils are exploring, that they are free to develop their personalities. He will occasionally slip off an article to a professional magazine presenting his program as a model for others to copy.

Filibuster Harry carries his oratory into the shop by lining up the boys—or setting them down—for a brief discourse that ordinarily lasts an hour. The topic may be any one of many on which Harry is well versed. The topic is usually not pertinent to any shop activity.

# A Christmas Project for International Goodwill

## The German Iron Curtain Can Be Lifted by You

**By Franklin J. Keller**

DURING these nervous days we hear much of the iron curtain, and well we may, for it hangs heavy over a troubled world. However, before and during World War II another iron curtain cut off all intelligent communication between the German people and the countries of the West. So German youth grew up without knowing, certainly without loving, many of their fellowmen. However, that curtain is now lifted and, if the objective of the Occupation, the reorientation of the German people, is to become a fact, it behooves all of us to work toward a state of amity and understanding.

Whenever I have been with German youth they have expressed bewilderment and despair. By their acts and beliefs, their own people have brought this upon them. We can do better. Let our young people talk and write to and do good deeds for these other young people for whom the iron curtain has been lifted.

Probably the most effective and kindest way of doing this is through a plan whereby an American school adopts the pupils in a German School. Since the vast majority in German vocational schools are also young workers, this kind of relation between vocational schools would seem to be a particularly happy one.

### How to Go About Adopting a German School

The best plan, of course, is to adopt a school which is similar in character and purpose to your own. This will mean that the interests of the students in the American and German schools will be somewhat the same so that the exchange of experiences through correspondence will be of greater consequence.

Letters requesting the names and addresses of schools may be addressed to Dr. Alonzo Grace, Director, Division of Educational and Cultural Relations, OMGUS, Berlin, APO 742, c/o Postmaster, New York, N. Y. Information concerning your school such as size, type of student body, and course offerings should be given in this letter so a similar type of school can be selected.

After you receive the name of the school, correspondence can begin directly with the school concerned. It is probably wisest to exchange correspondence before sending packages of school materials, clothes, or food so that needs may be determined first. If the exchange is with a vocational school, samples of shopwork could be exchanged which would interest both American and German students.

**EDITOR'S NOTE: At this season of the year it is particularly appropriate that students and instructors alike take action that will promote peace and international understanding. When in Europe recently, your editor was struck by the fact that redemption from totalitarian ideas was more possible with the youth of Germany and Austria than with adults in these unhappy countries. Two leaders in industrial education, Franklin Keller, Principal, Metropolitan Vocational High School, New York City, and Ralph C. Wenrich, State Director of Vocational Education for Michigan, agreeing with this viewpoint, present here a plan whereby vocational schools and departments can participate in a school adoption procedure which will help to spread international goodwill. Dr. Keller spent many months in Germany in the Education and Religious Affairs Branch of the American Military Government. Mr. Wenrich was in Austria earlier this year as an expert on vocational education.**

## Both Austrian and American Schools Profit by Adoption

**By Ralph C. Wenrich**

WHILE in Austria last spring I visited the *Höhere Bundeslehranstalt für Hauswirtschaftliche Frauenberufe* (Higher Federal School for Home Economics and Female Occupations) in Vienna. During the visit I learned that this school had been "adopted" by the Girls' Trade and Technical School of Milwaukee. In order to show their appreciation for the help and encouragement they receive from the American school, the students in an English class told me how much it meant to them individually, and the teacher spoke for the school as a whole. They also sang songs, including "America the Beautiful" and "Home on the Range." I left that school at the end of the day with a feeling that every school in the United States should adopt a school in some foreign country and especially in war-devastated lands where they need so urgently our spiritual and material help.

Through "school adoptions" schools in the United States have available an effective means for giving personalized assistance to schools in war-devastated countries and, at the same time, for building mutual ties which can yield rich educational and cultural benefits to the participants. Because of its simplicity and flexibility, the plan lends itself to ready use by almost any school which wishes to contribute to the achievement of world-wide democracy and peace through educational reconstruction.

Because of the extensive war damage and present poverty, the material aid that schools can provide is of primary importance. No less vital, however, to the "adopted" schools is the boost in morale which they receive from the tangible evidence of support for their courageous attempts in carrying on under extremely difficult conditions. At this crucial time in world history, with many European nations literally at the crossroads of East and West, their teachers and pupils need imperatively the expression of understanding, the clarification of democratic ideals and practices, and the substantive aid which is implied in the adoption scheme.

## How an American School Can Adopt an Austrian School

**By Ralph C. Wenrich**

1. The adopting school selects the institution it desires to help. Usually the American school adopts a school in Austria whose purposes and student body are essentially similar to its own. Any school wishing to adopt an Austrian school should contact Dr. Samuel H. Williams, Chief, Education Division of the U. S. Allied Commission for Austria (A.P.O. 777, c/o Postmaster, New York, N. Y.). The Education Division is prepared to furnish on request the names and other pertinent data of Austrian schools interested in adoption. To facilitate good matches, it would be well to send a brief description of your school, and an indication of the probable number of students and staff who may be counted on to engage in the interschool correspondence. Austrian schools will ordinarily conduct their correspondence in English, but arrangements can be made for letters in German as well.

2. To initiate the venture, your school would then arrange for students and staff members to send letters to the adopted school, expressing their interest and describing their school program. Packages of food, clothing, books, and other vital school supplies may accompany the original letters or may await replies from the adopted school which will probably indicate specific needs. Some schools may prefer to give material assistance through an organization such as the Save the Children Federation, Inc. Information about the function of this Federation can be obtained by addressing your inquiry to One Madison Avenue, New York 10, N. Y.

# An Easily-Made Modern Bookcase

*By R. Paul Lightle*

**The junior-high student of woodworking gets an opportunity to work on his own in this modern bookcase project. R. Paul Lightle is an industrial-arts instructor in the James H. Smart School, Fort Wayne, Indiana.**

THE educational experience of producing something on his own is a stimulating one for the boy in the junior-high age group. For that reason, it behooves those of us who teach at that level to encourage them to work on their own. There is little value for the student or for the instructor if a great deal of help is given on projects which could be produced by the student alone if guided correctly.

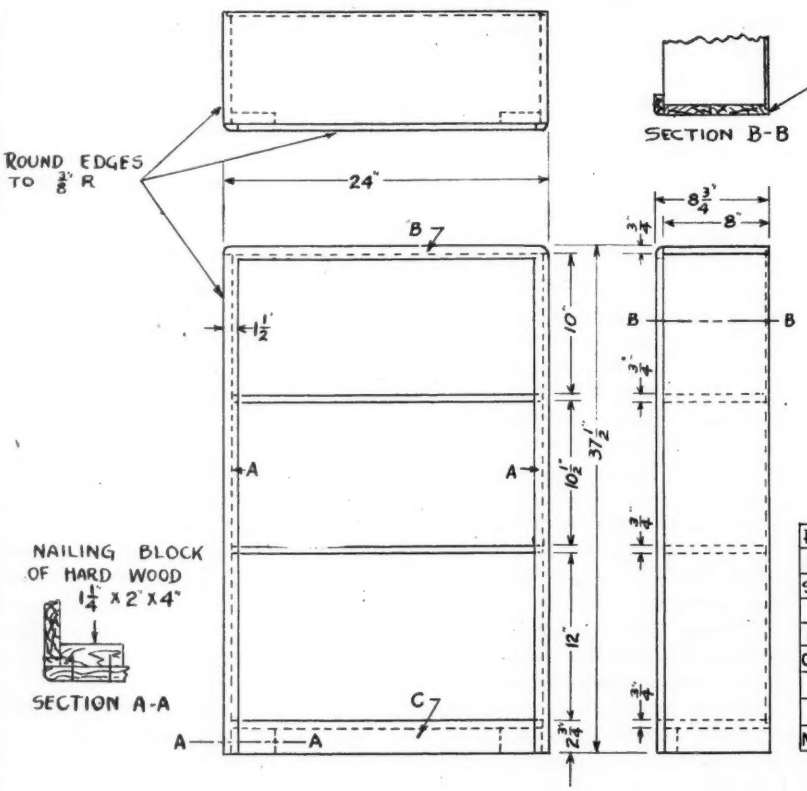
The junior-high student of woodworking gets an opportunity to work almost completely on his own in this modern bookcase project. It seems at first glance to be rather difficult for junior-high boys, but those who have had any home-workshop experience should not find it to be so. Dado joints for the shelves are not used, although they would probably make for better construction. Butt joints are used, simplifying the job and serving to make the student feel that the project is really his own work.

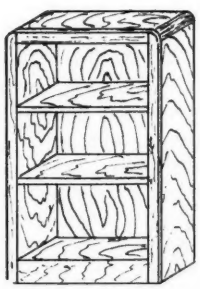
The dimensions given on the drawing below were made for a particular boy's room. Of course, the dimensions may be altered to meet the requirements in each student's situation. Part of the cost may be saved if no plywood back is included in the project. There is no danger of the case developing loose joints without plywood because it is firmly cased. In the bookcase shown, there was no power machinery available so that it was necessary to round the edges with a block plane and to follow up with sandpaper.

After assembly, the bookcase should be sanded throughout. The finish selected should be such that it blends with the rest of the furniture in the room.

The completed modern bookcase. Plywood back (not shown here) is optional with project.

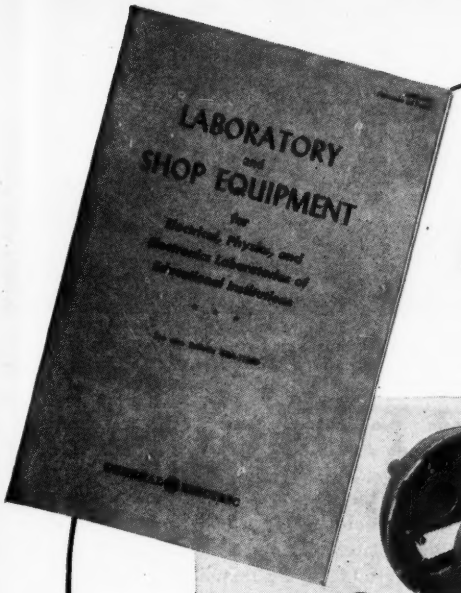
## MODERN BOOKCASE



BILL OF MATERIAL

| PART | PCS. | T | W | L |
|---|---|---|---|---|
| ENDS | 2 | 3/4" | 8" | 36 3/4" |
| SHELVES | 3 | 3/4" | 8" | 22 1/2" |
| TOP | 1 | 3/4" | 8" | 24" |
| BACK | 1 | 1/4" | 23 1/4" | 34 3/4" |
| CASING (A) | 2 | 3/4" | 1 1/2" | 37 1/2" |
| " (B) | 1 | 3/4" | 1 1/2" | 21" |
| " (C) | 1 | 3/4" | 2 3/4" | 21" |
| NAIL BLOCK | 2 | 1 1/4" | 2" | 4" |

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|---|---|---|---|
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| 300 w | 125 volts | d-c generator | or motor |

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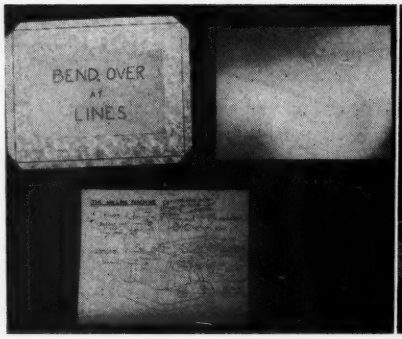
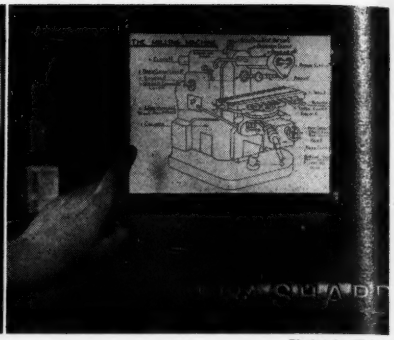



Materials for the machine part identification sign. The frame is made of galvanized stock.



Photos by Fisher

The completed project as it appears affixed to a milling machine. Note relative size of the sign.

# Every Part Has a Name

*By Leonard A. Kroll*

**Samuel Compers Vocation High School, Bronx, New York**

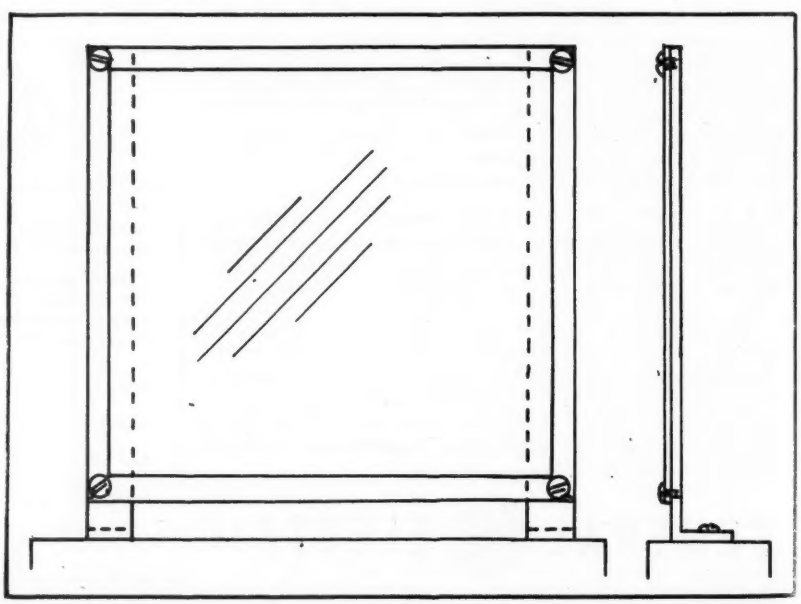
TESTED INSTRUCTIONAL PROJECT

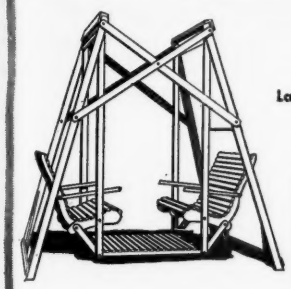
STUDENTS frequently ask questions about machinery in the shop before the period of operation of the particular machines comes about. The enlightened teacher will cater to students who show evidence of such interest by labeling each machine. The signs used to identify shop equipment facilitate the learning process as the student can find out for himself.

One of the further benefits to be derived from complete diagrammatic labeling of shop equipment is that it enables the student to learn *all* the parts of each piece of equipment. Every shop teacher has had the experience of hearing a lad say that the "thing" won't work or that the "whatsis" is broken, and so on. Students show a tendency to remember the large, important parts of the machine. While there is always the notebook to which we can send them, I prefer to make the part name available to them by mounting on each machine a sheetmetal holder or frame containing an ink sketch of the machine with all parts labeled. My experience has been that students learn about the machine much more rapidly when they are given visual aid in the form of these overall drawings.

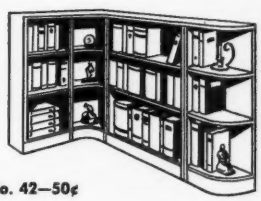
To make the frame, use approximately .020″ galvanized stock. The brackets should be of ¼″ x 1″ soft steel, shaped to fit the machine where it is to be mounted. Before bending the stock at the edges, the drawing and a plastic cover should be placed in the frame.

This teaching device will prove to be of great value in aiding students to identify parts as they encounter them in machine-shop practice. The diagram further aids them in seeing each part in relation to the whole.





Lawn Glider, No. 155—50¢



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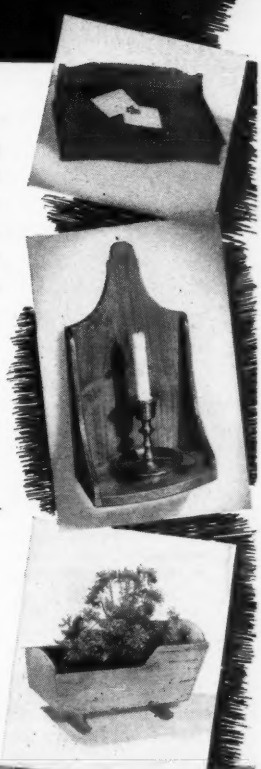
- Miniature cradle tray
- Trinket box
- Miniature chest of drawers
- Spice chest
- Spice box
- Corner candle stand
- Coffee table
- Book shelf
- Spice cabinet
- String box
- Salt box
- Shoe shine cabinet
- Footstool
- Kindling box
- Treasure box



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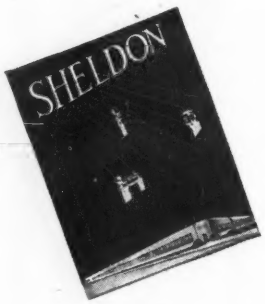
ABOUT YOUR FELLOW TEACHERS

W. ROGER ZINN, former educational consultant for the Jam Handy Organization, has been appointed assistant professor of education, division of adult education at Indiana University, Bloomington. He will be associate in production on the staff of the audio-visual center at the University . . . VERNE C. FRYKLUND, president of Stout Institute, Menomonie, Wis., returned recently from Japan where he aided in a program to set up vocational teacher certification standards and in setting up four-year curriculums for vocational education in that country . . . JOSEPH M. FAIR, former New Jersey State supervisor of trade and industrial training, has been named principal of the Irvington, N.J., School. . . . Succeeding C. E. HIGHLEN as principal of the Atlantic City, N.J., vocational schools is ALFRED SASEEN. The former has accepted a teaching position at Purdue University, Lafayette, Ind. . . . FRANK M. BREWSTER has been appointed director of vocational and industrial arts education in the Norfolk County, Va., public schools . . . JAMES M. HARPER, formerly of the vocational department of the Greensburg, Pa., High School, has been named coordinator of vocational and industrial education, Corry, Pa., public schools . . . KENNETH G. WISE has been added to the staff of the department of industrial arts at Fairmont, W. Va., State College. He is teaching engineering drawing and arts and crafts . . . THEODORE L. NIEMAN, teacher of woodworking at Manual Training High School, Peoria, Ill., died recently after twenty years service . . . M. F. STIGERS, formerly of the division of education and applied psychology at Purdue University, Lafayette, Ind., has resigned to enter industry . . . Additions to the staff at Memphis, Tenn., State College department of industrial arts are W. A. BROTHERTON, who will teach architectural drawing, and R. L. SHIRLEY, who will teach engineering drawing . . . The new assistant editor of the *American Vocational Journal* is GEORGE F. THEROUX, succeeding CARLTON E. WRIGHT . . . The new director of vocational education in Louisiana is JACK R. GAMBLE, former principal at Logansport, La. . . . THOMAS W. YOUNG is the new teacher of machine shop, both vocational and industrial arts, at Peru, Ind., High School. Also added to the staff at Peru is CYRIL HALL who is teaching mechanical drafting . . . The new director of the vocational-technical division, Pueblo, Colo., Junior College is LELAND A. BENZ, formerly at Maine Township, Ill., High School . . . R. D. SELLHORN, has resigned at Wayne, Neb., State Teachers College to accept a position in Bremerton, Wash. . . . New Missouri supervisor in adult industrial education is MAURICE L. STEWART, former coordinator of trade and industrial education in the Sikeston, Mo., schools . . . The new principal of the Hadley Technical High School, St. Louis, Mo., is H. H. MECKER, principal of the Blewett High School, St. Louis . . . CHARLES R. CRAKES has been named educational director of the DeVry Corporation. He is now guest instructor in audio-visual aids at the Chicago campus of Northwestern University . . . The new head of the industrial-arts department of Ohio Northern University, Ada, Ohio, is DEAN KITTLE. He succeeds D. R. LOWMAN, who resigned . . . A. G. CLEAVER has resigned from the Fort Wayne, Ind., Central High School staff to accept a teaching position with the Fort Wayne extension center for Purdue University. . . . Oregon's new assistant supervisor of trade and industrial education is WILLSON C. LEE.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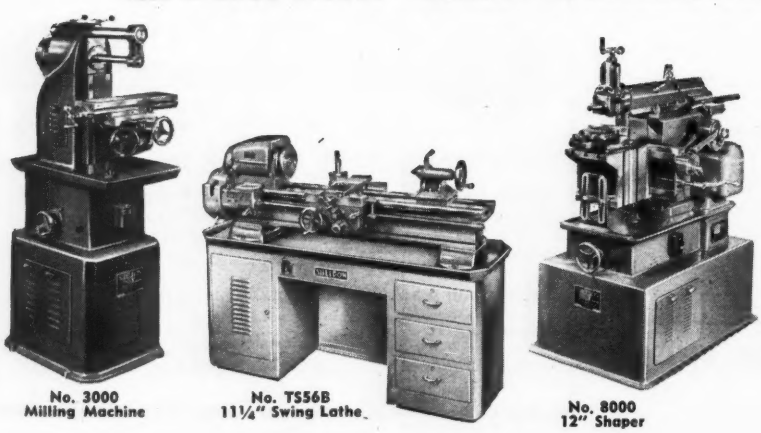

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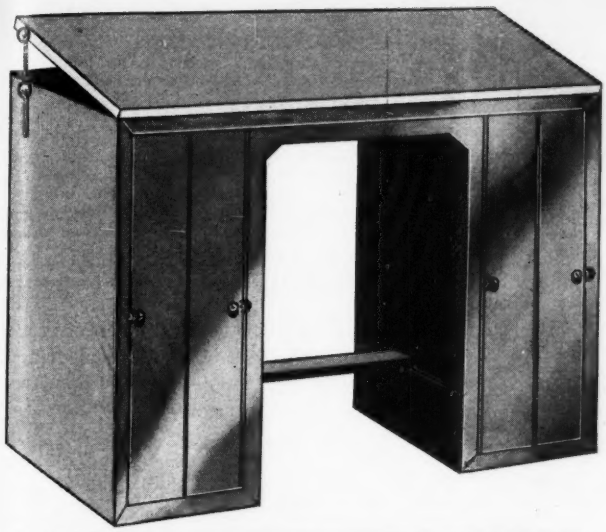

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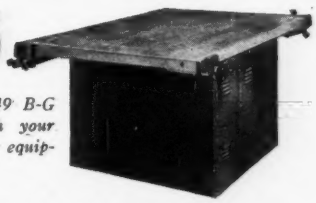

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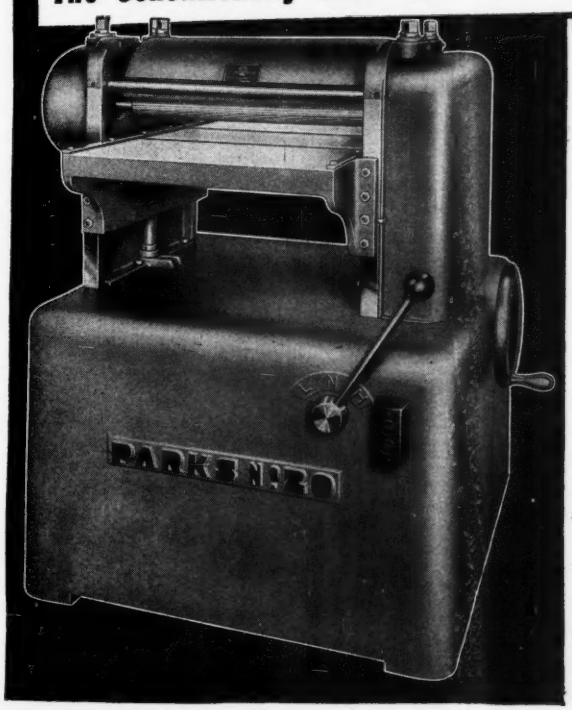

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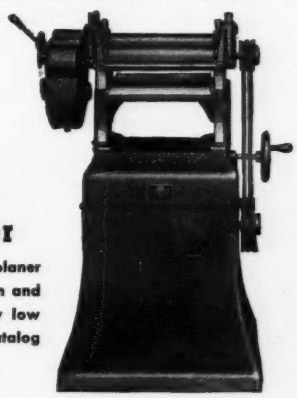

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# Teaching Tools

## POINTERS ON INSTRUCTION And SHOP ADMINISTRATION

**By John F. Nowak**

**SCHOOL SHOP inaugurates this month a new service to shop teachers. The department, "Teaching Tools," will contain each month an article on practical teaching methods by John F. Nowak, co-author of *The Home Mechanics Handbook*, and author of *Practical Residential Wiring* and numerous articles and monographs in the field of industrial education. He is a shop teacher with many years of experience and is now Administrator, Veterans and Reconversion Training Program, Board of Education, New York City.**

***How to Prevent Overcrowding***

ALL teachers in these times of student overabundance and instructor scarcity need to be on the alert to prevent overcrowding in their classes. Few teachers are consulted when programming is in process as to the judgments they may have on numbers of students that may be adequately taught in their classes. The principal or program committee seems generally to operate on the principle that each student should have unlimited access to courses of his own choosing.

More than others, shop teachers must consider the factor of safety in the size of classes. They may argue that instruction suffers when a shop class is unwieldy. Perhaps a more significant argument that one can use to impress administrators with the inadvisability of large class scheduling is the one of safety.

The shop teacher should arm himself with facts before he goes on record as to his belief about safe student capacity for his shop. There will be questions asked by those to whom he presents his figures. The teacher should anticipate and prepare the answers to these questions.

First step is to make a survey of the shop and determine the number of student work-stations which can be established with safety. Factors to consider here are the nature of the shop activity, the course of study, equipment available, etc. It is clear that shops will differ as to the hazard normally to be expected. Dental mechanics will permit of more work-stations than will printing press-work, for example, where the ever-present danger from moving machinery is great. The danger factor is greater in a shop which is equipped for electric motor and generator instruction than it would be in an electric shop equipped only to handle bell wiring.

The survey completed, the teacher should prepare a memorandum indicating the number of work stations which he believes may be operated safely in his classes. A copy should be sent to the instructor's immediate superior and a copy retained. The shop teacher thus places himself on record as to his judgment of the number of students who may with safety be instructed in an activity in his shop.

The shop teacher's judgment as to the number of students to be accommodated in his shop should in all cases be a reasonable one. The wise teacher will use the safety argument in order to prevent overcrowding and increase his teaching efficiency. He will not use it to make his work load lighter than it should be.

### Question Box

**As a complement to this department, readers are invited to send in questions which relate to methods of teaching shopwork. If a personal reply is desired, include a stamped, self-addressed envelope. Send questions to:**

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**2735 Marion Avenue**
**Bronx 58, New York**

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# NEWS

**What's Doing in the Field of INDUSTRIAL EDUCATION**

## Printing Curriculum Study

WORKING toward the ultimate goal of setting up basic curriculums in the graphic arts field, a commission has been established jointly by the Printing Industry of America, Inc., Lithographic Technical Foundation, and the National Graphic Arts Education Association. At a conference held in Washington this summer, it was decided to proceed to develop four basic curriculums. These are to be at the industrial-arts or guidance level, the vocational or preapprentice level, the college level, and for training printing teachers. Known as the Commission on Basic Curricula, the group is now engaged in the compilation of materials on the printing curriculum as used in various educational institutions throughout the country and has Hartley E. Jackson of San Jose, Calif., State College, as chairman. Several hundred outstanding men in printing education will be consulted by the commission in its work which, it is anticipated, will take a year or more.


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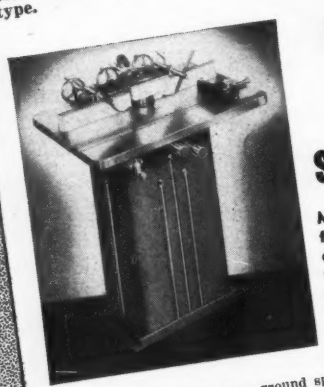
having "down-draught" exhaust for chips from the cutters, and ½" and ¾" cutter-arbors formed on a solid one-piece vanadium-steel spindle—stronger, more accurate and safer than any 2-piece type.



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Large 1" diameter precision ground spindle, carried on two high quality dust and grease sealed ball bearings, stays true even after years of running wide, deep cuts. The bearing-seats in the quill casting, as well as the entire body of quill are all finely ground to precision dimensions.

The table features a large opening with provision for nested table rings, with these advantages: (1) all cutters, up to 6¼" diameter lower below table to undercut for greater safety. (2) undercutting lessens danger of springing spindle. (3) undercutting brings cutters closer to spindle bearings to reduce strain and wear.

SPECIFICATIONS:

Table (has 1 miter-gauge groove): 20" x 27½".
Table with Front Wing: 28" x 27½", and 2".
Table-Opening Diameters: 6½", 3½", and 2".
Widest Bevel Edge Knife Capacity: 2½".
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## Minnesota Convention

THE second statewide convention of the Minnesota Vocational Association drew 1800 participants on October 28 and 29 at Minneapolis. The association has shown a rapid growth during the past two years and now has nearly 1000 members as contrasted with 320 in 1947. New officers are president, Dr. Ella Rose, Professor of Home Economics Education, University of Minnesota; vice-president, George Campaign, Director of Vocational Education, Duluth; secretary-treasurer, W. J. Kortesmaki, Assistant State Supervisor of Agricultural Education, State Department of Education.

## Scholastic Industrial-Arts Awards

A NEW division has been added to the Scholastic Industrial-Arts Awards program this year—radio-electronics. The divisions in which entries can now be made include wood, metal, drawing, plastics, machine shop, and radio-electronics. Prizes of cash and merchandise are awarded winners and certificates are presented to instructors whose students win prizes as well as to the winners themselves. Information booklets and entry blanks may be obtained from George H. Fern, Director, Scholastic Industrial-Arts Awards, 7 East 12th St., New York 3, N.Y.

## AIAA Convention

ANNOUNCEMENT has been made that the American Industrial-Arts Association will hold its 1949 convention May 12-14 at the Hotel Jefferson in St. Louis, Mo.

## New Building at Bellingham

CONSTRUCTION has started on a new Arts Building at Western Washington College of Education, Bellingham, according to Charles M. Rice, Chairman of the Industrial-Arts Department. The upstairs of the two-story building will provide quarters for the Art Department while the lower floor will include industrial-arts facilities. Provision is made for a large general shop, a planning and drafting room, photography laboratory, a visual-aids workroom, seminar room and library, a main office, finishing room, general office, storage areas, and a large room designed for use as an industrial museum, large classroom, or assembly room with picture-projection facilities. Another general-shop area on the lower floor with additional rooms for elementary industrial arts upstairs and a wing for a print shop will be added later.

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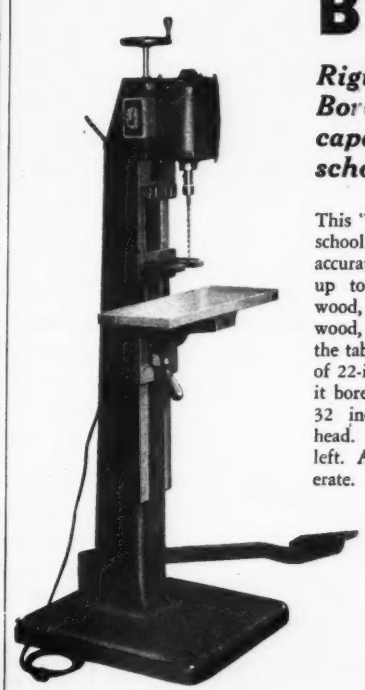

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This "Oliver" Borer is a favorite in school shops. It drills clean holes accurately and quickly. Bores holes up to ¾-inch diameter in hard wood, up to 1½ inches in soft wood, up to 4 inches deep. Using the table, it bores holes in the edge of 22-inch stock. Without the table it bores holes in the edge of stock 32 inches wide. Has adjustable head. Table tilts 45° to right and left. A sturdy machine, easy to operate.

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# School Shop KINKS

Payment will be made for each Kink published. Send to Editor, School Shop, Ann Arbor, Mich.

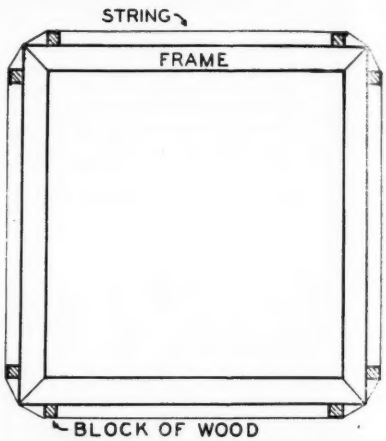
## How to Correct Blueprints Painlessly

After the first run of blueprints on a job or project is made, it is often found desirable to make changes or additions. Colored pencils are seldom satisfactory, and white pencil marks soon smear to an illegible blur.

An easy way of making additions or changes on a blueprint that are practically undetectable is through the use of silver nitrate. A ready source of silver nitrate is a caustic pencil. Simply shave off a piece the size of a pinhead and stir it into a drop of water with a penpoint. Use this solution as you would ink and print or draw on the blueprint. A white line will immediately appear where it is used.—*A. T. Schell, Hammond Technical Vocational High School, Hammond, Ind.*

## Gluing a Picture Frame

Gluing operations on picture frames in the general shop need not cause loss of time and trouble. Eight small blocks of wood and a piece of string aid in doing a neat job. Assembly depends, in the first place, on accurate cutting of the mouldings as to length and angle (45°). Mitered corners may be made to fit perfectly by working a dovetail saw through each miter to straighten it.




Apply the glue to the frame mouldings after placing them on a flat surface. Wind a piece of string around the ends of the frame-to-be and tie it tightly. Place two blocks of wood under the string at the center of each moulding. By moving the blocks in opposite directions toward the corners, you can pull the string taut. When the glue dries, the frame will be square. — *Richard H. Schoepflin, Teachers College of Connecticut, New Britain, Conn.*

## Use a Cup

Finding suitable and clean containers from which to paint and varnish often creates a finishing room problem.

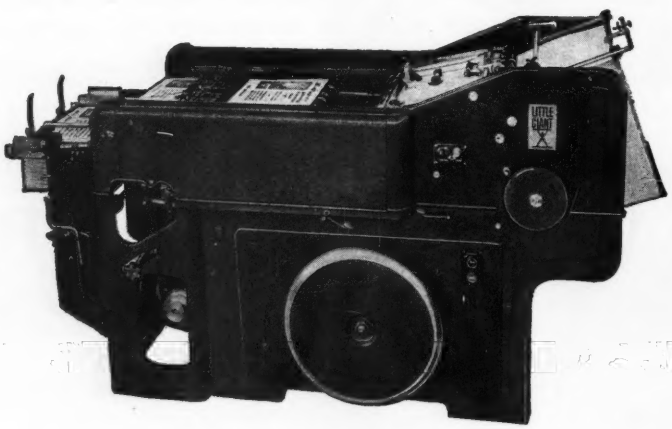
The glass jars and tin cans frequently used for this purpose can be replaced by several inexpensive tin drinking cups. These cups are available at hardware and department stores.

The cup handle proves very useful in holding the cup while working and may be used to hang the cup on conveniently located hooks when not in use. Each cup should be labeled for its intended use, such as for varnish, shellac, and various paints and lacquers.—*David F. Becker, Blair City Schools, Blair, Nebr.*

## For Polishing

It is possible to do fine polishing on light sheetmetal jobs and projects without the use of wheels. Simply use ordinary slacked lime or powdered chalk. Rub with a clean cloth. These two agents have the same base, by the way, and they work wonders when it comes to brightening up metal.—*Edward G. Senkewitz, Fifth Avenue High School, Pittsburgh, Pa.*


The NEW ATF LITTLE GIANT



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SCHOOL SET contains Handee and 40 accessories in carrying case $27.50. Handee with 7 accessories (no case) $20.50. Get at stores or sent postpaid. Satisfaction Guaranteed. CHICAGO WHEEL & MFG. CO., 1101 Monroe St., Dept. SH, Chicago 7, Ill. FREE 52-page Manual.

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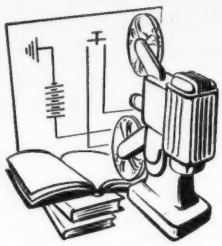

**Books:**

**Television and F. M. Receiver Servicing.** Kiver. New York: D. Van Nostrand Co., 1948. Pp. 212. $2.95.

Designed to meet the demand for a text which will serve as a guide to F-M and television repair and installation. It is written so that the person who understands A-M radio will be able to understand the text matter concerning F-M and television. There are many diagrams and some illustrations of parts in use in modern radio and video operation.

Milton S. Kiver is the author of *Television Simplified, F-M Simplified,* and *U H F Radio Simplified.*

**Mechanical Drawing Achievement Inventories.** Allison and Allison. Chicago, Ill.: The Goodheart-Willcox Co., 1948. Pp. vi + 44. $1.00 (paper bound).

This is a series of tests for determining student experience and achievement in drafting. It is intended to aid the teacher by providing guides for instructional programs for individual students and to aid the student by providing him with a blueprint of what he should know after completing certain instructional units in his subject. Most of the tests are drawings of tools or operations in manufacturing processes which might be expected to be shown in representational form on drawings. The testing technics are matching, true-false, completion, and multiple choice.

Floyd C. Allison is head of the drafting department, Chadsey High School, Detroit, Michigan. Arthur V. Allison is an industrial engineer in Grand Rapids, Michigan.

**Machine Woodworking** (revised edition). Smith. Bloomington, Illinois: McKnight and McKnight, 1948. Pp. 152. $2.75.

A basic text for use in advanced courses in woodworking, this work utilizes the unit method of instruction. Text material explains all operations for the student and it is expected that the instructor will give assignments using the power tool and the technic most recently explained. The student is expected to discover the correct method of performing each operation by reference to the text. This will cause him to rely less on the instructor and more on his own ability to follow written instructions and to recall demonstrated operations. Each unit involves an operation and all operations are illustrated with drawings of each stage of the operation.

Robert E. Smith is Professor of Education, The Ohio State University.

**How To Paint with Air.** Knaus. Chicago, Ill.: The Paasche Airbrush Co., 1948. Pp. 92. $3.75.

This is a book for artists, illustrators, designers, architects, cartoonists, photographers, and teachers and students of industrial arts who wish to know the technics and uses of air painting. There are more than 200 illustrations, including samples of work done with air brushes by leading commercial artists and illustrators.

Frank J. Knaus is a commercial artist. He was formerly associated with the Walt Disney organization in Hollywood, Calif.

**Mechanical Drawing.** French and Svensen. New York: McGraw-Hill Book Co., 1948 (fifth edition, revised). Pp. x + 437. $2.80.

The enlarged edition of the French and Svensen text has been produced in order to bring it in "conformity with modern industrial practice and with the high standards of today's teachers." It is intended for use with a series of six McGraw-Hill Text-Films which are correlated with various chapters in the text. Teaching aids in the book are in the last chapter which is devoted to 23 groups of problems in the field.

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Thomas E. French is the author of *Engineering Drawing* and other works. Carl L. Svensen wrote *Drafting for Engineers* and other books.

**Gem Cutting.** Willems. Peoria, Ill.: The Manual Arts Press, 1948. Pp. 224. $3.50.

The work of a person who took up lapidary work as a hobby and made it his profession, this book is intended for anyone who wishes to take up gem cutting or to get information on this little-known subject. It can be used for selfinstruction or as part of a teaching course in the field. A 16mm film and a set of 2" x 2" (35mm) slides in color are in preparation as supplementary aids for use with the book. There are instructional chapters on various operations in the trade with photos and diagrams.

J. Daniel Willems is an expert in lapidary work and an inventor.

**Basic Repair Operations.** Albany, N. Y.: Delmar Publishers, Inc., 1948. Pp. ix + 220. $2.50 paper covered, $3.25 cloth covered.

Manual "B" in the Delmar series for training in automotive repair occupations, this book is concerned with the "related technical information and repair operations which are basic in training automobile mechanics." Emphasis is placed on the duties and responsibilities of the auto mechanic. Instructional units cover every phase of the mechanics of repair installations. Many drawings, photos, and diagrams are included.

The publication is under the sponsorship of the New York State Vocational and Practical Arts Association.

## *Pamphlets:*

**Occupational Outlook Information Series for States** is a group of 49 pamphlets (for the states and the District of Columbia) showing the major industries, industrial trends since 1940, and population trends and outlook for each state. The series are useful for counselors and teachers interested in passing on to youth the latest job information for their areas. The pamphlets are available for 10c each from the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Ask for pamphlets for the state or states in which you are interested under the title, *Occupational Outlook Information Series for States, VA Pamphlet Series 7-2.*

**Employment Outlook in the Plastics Products Industry** is bulletin No. 929 in the Occupational Outlook series of the Bureau of Labor Statistics of the U. S. Department of Labor. It is a survey of the plastics industry, its nature, operation, locations, work prospects, and general outlook for the future. There is a section devoted to a discussion of the training opportunities open to new workers in the field; both industrial training and trade school and college opportunities are listed. Bulletin may be procured for 15c from the Superintendent of Documents, Washington 25, D. C.

**Opportunities in the Automotive Business** is a booklet prepared by the service section of the General Motors Corporation. It contains a short sketch of the development of the automotive industry and an account of the present outlook for employment. It describes work at central factories and at service installations throughout the country. Copies are available without charge at the Educational Service Department of Public Relations, General Motors Corp., Detroit 2, Mich.

## *Visuals:*

**Elements of Art** is a series of eight discussional slidefilms recently issued by the Jam Handy Organization, Detroit, Michigan. Each film is an aid in explaining an element of art. Films in the series are Lines, Shapes, More Shapes, Solid Shapes, Color, Using Color, Proportion, and Painting a Picture. The series costs $33.50; individual films, $4.95. For details write to the Jam Handy Organization, 2821 E. Grand Blvd., Detroit 11, Mich.

**Catalog Number 11** is a compilation of the latest 16mm sound films offered by the Princeton Film Center, Princeton, N. J. The catalog is nearly 100 pages and lists both free and rental films. For a copy, at no cost, write to the Princeton Film Center, Princeton, N. J. Those requesting copies will have their names placed on a list to receive supplementary announcements of new films at regular intervals.

**A New Tool for Teaching** is a booklet prepared by the Ampro Corporation, a firm which produces motion-picture equipment. It is a discussion of the place of sound films in education. There are tips on the proper use of the motion-picture, descriptions of the equipment needed, and suggestions for setting up an integrated sound-film program in the school system, as well as descriptions and pictures of equipment manufactured by the publisher. Copies are sent to schools and colleges throughout the country. Extra copies may be secured for 10c by writing to Ampro Corporation, 2835 N. Western Ave., Chicago 18, Ill.


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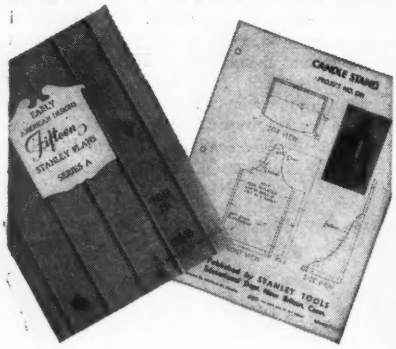
# News from INDUSTRY

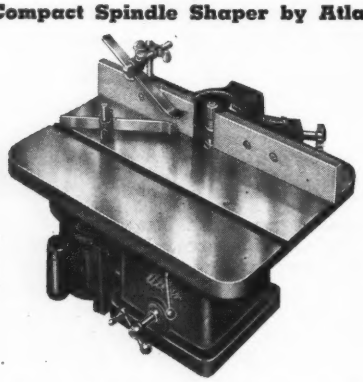
### Old American Designs Announced




Stanley Tools, New Britain, Conn., have recently introduced a new line of plan sheets for woodworking shops. The plans all feature Early American influences. They are designed for use in junior-high shops. Each is printed on a separate 8½″ x 11″ sheet, with photograph illustration of the finished product.

The designs are available in two packets, "A" and "B," offered by the Stanley Educational Department. Each packet contains 15 different designs and is offered for sale at 25c per packet, postpaid. Write to Education Division, Stanley Tools, New Britain, Conn.; *or check No. 24 on the coupon.*

### Compact Spindle Shaper by Atlas



A spindle shaper built for accuracy and efficiency in the full range of shaping operations is the latest in the Atlas Press Company, Kalamazoo, Mich., line.

The chief features of the new product are: heavy construction which keeps vibration at minimum; fixed spindle design for smooth cutting; deep grooved ball bearings; heavy fence with 1¼″ adjustment and ½″ adjustment for right side; convenient controls for quick set-up; attached motor mounting bracket which makes up a compact, portable unit. It operates on a ½ HP, 3450 rpm motor. Without the motor, specifications are 26″ x 15½″ x 18¼″.

For further information write the Atlas Press Co., 26031 N. Pitcher St., Kalamazoo, Mich.; *or check No. 25 on the coupon.*

### The Friction-Matic Wet Tool Grinder

The Boice-Crane Friction-Matic grinder for tools and knives will throw no water on its operator, has selfadjusting friction drive, and operates at constant speed throughout its life, according to an announcement from that firm. It features an extra-wide tool rest which permits sharpening of longhandled knives and hatchets and wide plane bits and scrapers. Peripheral speed is consiant on the grinder even as the wheel diameter is reduced through wear. There is an automatic step-up in wheel rim speed in order to compensate for the loss in peripheral surface.

For complete information write to Boice-Crane Co., 938 Central Ave., Toledo 6, Ohio; *or check No. 26 on the coupon.*

### Educational Value in New Liquid Plastic Kit

A new educational plastic kit has been developed by the Pittsburgh Fabric Products Company for school and laboratory use. The kit has instructions for use of the modern thermosetting resins. Kelon, the firm's liquid plastic specialty, is one of these and the kit contains materials for simple molding and casting of objects with the product. Advantages of Kelon are that it is durable, permanent, and clear. Five steps are necessary for molding with it and the ordinary home double boiler can be used to cure the mold.

For complete information write to the Pittsburgh Fabric Products Co., 4756 Penn Ave., Pittsburgh 6, Pa.; *or check No. 27 on the coupon.*

### Multipress Available in One Unit

The *Midget*, a multi-purpose, oil-hydraulic press with a capacity of 2000 pounds, is offered for sale by the Denison Engineering Company, Columbus, Ohio. The machine has its own pumping equipment. Ram stroke, ram speed, and ram pressure are all easily regulated by controls which are placed in easy reach for the operator.

Weight of the machine is only 270 pounds. Its measurements, overall, are 13″ x 30″ x 29¾″ and it is easily moved throughout the shop. It is adaptable to an unusually wide range of operations and permits an exceptional latitude in the use of special toolings and accessories. For further details write the Denison Manufacturing Co., 1160 Dublin Rd., Columbus 16, Ohio; *or check No. 28 on the coupon.*

### DECAL-CRAFT Project Kit

More than 12,000 teachers are now teaching color and design principles with the aid of a *free* help called the DECAL-CRAFT project kit, according to its sponsor, the Meyercord Company, manufacturer of decalcomania.

Meyercord's free kit includes enough decals for the whole class, and all materials needed to set up a study project teaching the arts of interior and accessory decoration. Project sheets explain basic design technics and suggest an endless variety of objects to be decorated.

DECAL-CRAFT users report enthusiastic student response. DECAL-CRAFTed articles when returned home, help to knit closer parent-teacher relationships.

Teachers who want the free DECAL-CRAFT kit should write on school stationery, indicating subject taught and number of pupils, direct to Educational Division, The Meyercord Company, Dept. 125-11, 5323 West Lake St., Chicago 44, Ill.; *or check No. 29 on the coupon,* stating number of pupils.

## New Literature

**Model "C" Lathes and BUR-ology.** Two booklets produced by Pratt & Whitney, West Hartford, Connecticut, describing phases of their industrial line. The first contains specific descriptions of variously sized model "C" lathes as well as a general description of the model and its operational features. The second pamphlet is concerned with the use (and mis-use) of burs in industry. There is a history of the bur as it has come into industrial use and a list of definitions in use in the field of "burology." For free copies of the booklets write to Advertising Dept., Pratt & Whitney, Charter Oak Blvd., West Hartford 1, Conn., mentioning SCHOOL SHOP; *or check No. 30 on the coupon.*

**Allied Radio 1949 Catalog.** Contains comprehensive listings of radio and electronic parts and equipment for classroom, laboratory, and shop. Emphasis in this 180-page catalog is on the selection of books, materials, training kits, test instruments, parts, and equipment required by schools for their radio and electronic training programs. Catalog will be sent on request. Write to Allied Radio Corporation, 833 W. Jackson Blvd., Chicago 7, Ill.; *or check No. 31 on the coupon.*

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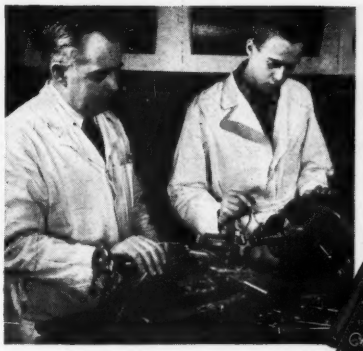

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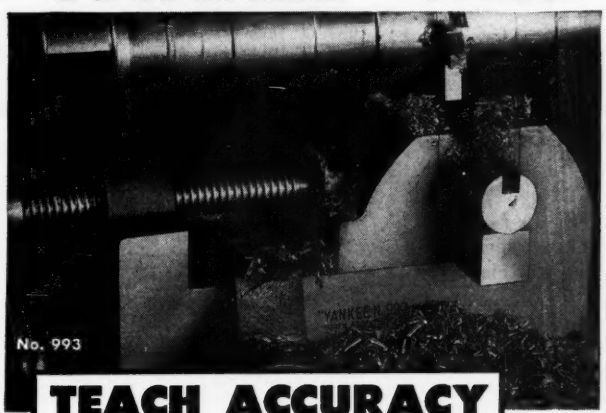


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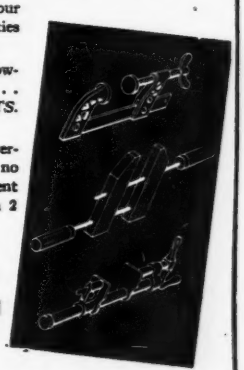

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## From Washington *from page 28*

The year's best speech on education was probably made in Washington by a University of Chicago professor. He said that our schools are rigged up to serve only the kids who can handle words easily. Other children are ignored or helped in a half-hearted way. Perhaps the professor (whose name is Ralph Tyler) didn't know of the efforts of industrial-arts and trade teachers, or perhaps he did. At any rate he insisted that the verbal pupil is the center of the school show and that words, words, words, (as Hamlet said in the best motion picture of the year) rule the school.

While we are plugging books and movies, here is a good word for "Apartment for Peggy," a Twentieth Century-Fox technicolor piece worth seeing during the Christmas vacation. It pictures a young man who, after some soul searching, decides to become a teacher.

**Reform in the Comics.**—After a 10-year build-up, comic books emerged as a first-rate educational force—teaching children to strangle and maim their playmates. The comics publishers (who sold 60 million copies a month during the last year) were indignant at such charges whenever they were made. Nevertheless, city after city passed ordinances regulating the sale of the gory story in strips. As the year ended, educators in Washington were working on a code for comic book publishers, suggesting that they picturize the excitement inherent in history, biography, folk-lore, and science.

**Unreleased Time.**—The Supreme Court ruled that public schools may not give religious instruction in their classrooms. The cry of "godless public schools!" was heard once more over the land. To this, public school officials replied, "We stress spiritual values such as tolerance and brotherhood." To prove it, the Educational Policies Commission will publish in 1949 a yearbook telling how the public schools inculcate a sense of religion in pupils without teaching dogmas.

**In the 1949 Wind.**—The proposal for regional schools in the South was beaten in Congress last summer, but southern governors will try again in 1949 to push the plan through. Merit rating for teachers ("if you're good, you get a raise") went into effect in New York State. Teachers everywhere condemned it, saying there is no scientific method for measuring good teaching. Nevertheless, merit rating may come to stay for all


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teachers if the New York experiment succeeds.

"Iron curtain," a phrase invented by Winston Churchill, was very popular during the year. But the Library of Congress says it is receiving more Russian books, magazines, newspapers, and technical bulletins than ever before. Only a few scholars and officials bother to read them.

The year ended without a Commissioner at the head of the U. S. Office of Education. Up to November 2, few top-notch educators wanted the job. Now that the Truman administration is secure for four more years, there may be a few applicants. To get a flood of applications, one simple step is necessary: raise the Commissioner's salary from $10,000 to $18,000 a year.

There is a strong movement, however, in Washington to overhaul the entire federal set-up for education. The plan is to pull the Office of Education out of the Federal Security Agency, and to appoint an independent National Board of Education to advise the Commissioner. Such a proposal would have had little chance last January when the Congress was controlled by the Republicans. This year the Congress is dominated by Democrats. Anything can happen.

**If the Shoe Fits.**—During American Education Week a vocational high school in New York City which trains for sea careers held "open ship." How many shop teachers held open shop?

## *IN THE Morning Mail . .*

Brief comments about SCHOOL SHOP and the field it serves are invited. Address the Editor, SCHOOL SHOP, Ann Arbor, Michigan.

Gentlemen:

SCHOOL SHOP magazine has been a true friend in my first two months of teaching and I shall look forward to each issue. . . .

*Robert H. Arntz,*
Unionville, Pa.

Gentlemen:

I like your editorial, "This Matter of Time." [November SCHOOL SHOP, page 2]. This is the same argument I have had with apprentice people for several years.

We have suggested that they set up a schedule of accomplishments for each pay-rate increase throughout the apprenticeship period. These accomplishments should be measured by both practical and written tests. It seems that even the men of the apprentice training service of the U. S. Department of Labor are afraid of such a procedure. We can't get them to even enforce their own suggestions or rules. They promote apprentice programs and ask us to offer related subjects for apprentices, they encourage apprentices to attend school, but only in isolated cases do they actually require schooling or definite accomplishments before being advanced from one step of the apprenticeship to the next.

Perhaps a few more editorials similar to yours might help correct the situation.

*E. L. Williams,*
Director, Industrial Extension Service,
Texas A. and M. College.

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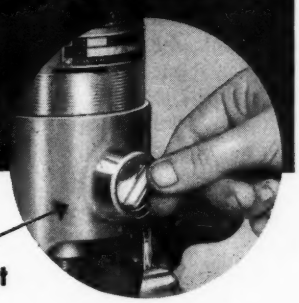

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# FROM WASHINGTON

BY MICHAEL PACA

NOW at the year's ending, here are two score facts on the march of education which school shop men may have missed.

**World Split.**—Educators stopped talking about one world and began to write books and articles about education in a divided world. Unesco, which was supposed to help bring about one, warless world, fell for the same line, pushed into it by the men in the State Department, with and without striped pants.

Meanwhile, men in the Pentagon, with or without brass, looked to the split atom as the solution to the problem of a split world.

But educators rejected the idea of atom-bombing Russia as un-Christian and impractical. They have a more powerful weapon, they said—education.

Their judgment was this: Russia won't start shooting. She's too weak. Her aim is to make Communism so attractive to the plain people everywhere, that they will want to introduce that system in all the countries of the world. Our answer, therefore, must be to make democracy even more attractive so that our people will not be seduced by Russia's way of life. The prospect is that for the next 20 years Russia and the United States will glower at each other in their armed camps. Only better schools, producing better educated, more productive citizens can break this cold impasse.

**The People Spoke.**—This was the year in which an election was supposed to decide the fate of the country. But neither major candidate saw fit to discuss education in his campaign. You-Know-Who kept silent on the issue; the man now in the White House said he is for all the things he had asked the Eightieth Congress to enact, which included federal aid to education.

Not quite sure, however, whether federal aid to education *is* needed, the 48 state governors decided to take a close look at their own systems of education through a private study.

Regardless of this action, and regardless of other oponents of federal aid, this measure is certain to be enacted into law before Truman leaves the White House in 1953. So predicted the predictors, holding for support to no poll. They based their rash words on the fact that the fourth and most radical New Deal is here in Washington. It was brought in by Harry Truman and organized labor. These two forces (of which the greater is undoubtedly the first) plan to spend close to one billion dollars on federal aid to schools, social security for teachers, a national bureau for workers' extension education, a national science foundation, federal scholarships, and a stronger U. S. Employment Service with job guidance services for youth.

There may also be created during the next four years a strong Department of Social Welfare equipped to give major attention to social and educational problems of our country.

**Against Jim Crow.**—Negroes put up their scrappiest fight in a generation for what they thought was their rightful share of education. Graduate and professional students infiltrated into white southern universities. They argued that the Supreme Court had ruled that they were entitled to equal education. In Virginia small groups of Negro high-school pupils knocked at the doors of white schools seeking admission. They wanted to get their schooling in the same kinds of light, airy classrooms and well-equipped shops as their white neighbors.

**Mother Army.**—The draft began to call young men from their jobs and classrooms. But the Army, in effect, said to parents: "Don't worry. We'll take care of your boy. We'll meet all his spiritual, moral, and educational needs." No semantics expert took the time to explain that phrase.

**Gas-Pipe Radio.**—The Federal Communications Commission shook its finger at school men saying: "Buses, taxicabs, and department stores are making wide use of radio. Only education is lagging far behind. If school people don't wake up, the spectrum will be gobbled up by commercial interests. The least you educators can do is to get in on gas-pipe radio." (If industrial-education teachers want to know more about this type of radio write the FCC for details.)

**New Books.**—Two books worth any schoolman's time were published during the year. Stuart Chase, master of simple words, summed up all we now know about the art of dealing with humans, whether individuals or groups. He called his book *The Proper Study of Mankind* . . . which, as Alexander Pope once sang, ". . . is man." Chase calls his book a study of human relations, or the science of getting the best out of people, instead of stuffing them with facts. Fiction produced *The Hickory Stick* by Virgil Scott. It describes how teachers, board of education members, and principals throw knives at each other in a midwest town. If you have more time during the holidays, you might also read *Education in a Divided World* by James B. Conant. It sums up the "competent judgment" on the cold war touched on in the fifth paragraph of this Letter.

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FINISHES FOR ALCOA ALUMINUM
ALCOA ALUMINUM AND ITS ALLOYS
FORMING ALCOA ALUMINUM
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Which of these books and visual aids do you need? They will prove invaluable to any teacher whose students are working with aluminum. Below is additional material, useful for general background information on aluminum. All teaching aids described on this page sent free to industrial arts teachers. Write ALUMINUM COMPANY OF AMERICA, 1775 Gulf Bldg., Pittsburgh 19, Pa.

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